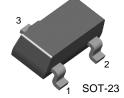


## BC807/BC808

## **Switching and Amplifier Applications**

- Suitable for AF-Driver stages and low power output stages
- Complement to BC817/BC818



1. Base 2. Emitter 3. Collector

## **PNP Epitaxial Silicon Transistor**

### Absolute Maximum Ratings Ta=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>CES</sub>	Collector-Emitter Voltage		
	: BC807	-50	V
	: BC808	-30	V
V <sub>CEO</sub>	Collector-Emitter Voltage		
	: BC807	-45	V
	: BC808	-25	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current (DC)	-800	mA
P <sub>C</sub>	Collector Power Dissipation	-310	mW
P <sub>C</sub>	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	-65 ~ 150	°C

## Electrical Characteristics T<sub>a</sub>=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV <sub>CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = -10mA, I <sub>B</sub> =0				
	: BC807		-45			V
	: BC808		-25			V
BV <sub>CES</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = -0.1mA, V <sub>BF</sub> =0				
020	: BC807		-50			V
	: BC808		-30			V
BV <sub>EBO</sub>	Emitter-Base Breakdown Voltage	$I_E = -0.1 \text{mA}, I_C = 0$	-5			V
I <sub>CES</sub>	Collector Cut-off Current	V <sub>CE</sub> = -25V, V <sub>BE</sub> =0			-100	nA
I <sub>EBO</sub>	Emitter Cut-off Current	$V_{EB}$ = -4V, $I_{C}$ =0			-100	nA
h <sub>FE1</sub>	DC Current Gain	V <sub>CE</sub> = -1V, I <sub>C</sub> = -100mA	100		630	
h <sub>FE2</sub>		V <sub>CE</sub> = -1V, I <sub>C</sub> = -300mA	60			
V <sub>CE</sub> (sat)	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -500mA, I <sub>B</sub> = -50mA			-0.7	V
V <sub>BE</sub> (on)	Base-Emitter On Voltage	$V_{CE} = -1V, I_{C} = -300 \text{mA}$			-1.2	V
f <sub>T</sub>	Current Gain Bandwidth Product	$V_{CE} = -5V, I_{C} = -10mA$		100		MHz
		f=50MHz				
C <sub>ob</sub>	Output Capacitance	V <sub>CB</sub> = -10V, f=1MHz			12	pF

# h<sub>FE</sub> Classification

Classification	16	25	40
h <sub>FE1</sub>	100 ~ 250	160 ~ 400	250 ~ 630
h <sub>FE2</sub>	60-	100-	170-

## **Marking Code**

Туре	807-16	807-25	807-40	808-16	808-25	808-40
Marking	9FA	9FB	9FC	9GA	9GB	9GC

## **Typical Characteristics**

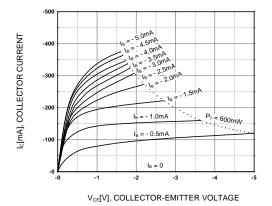


Figure 1. Static Characteristic

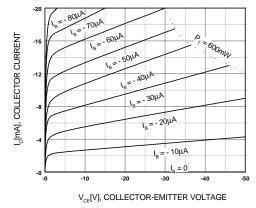


Figure 2. Static Characteristic

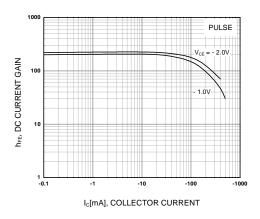


Figure 3. DC current Gain

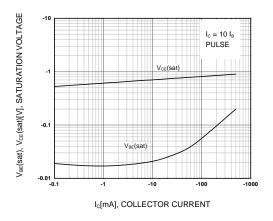


Figure 4. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

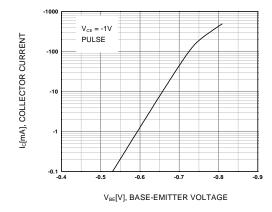


Figure 5. Base-Emitter On Voltage

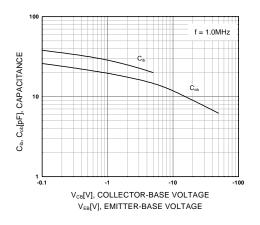


Figure 6. Input Output Capacitance

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# Typical Characteristics (Continued)

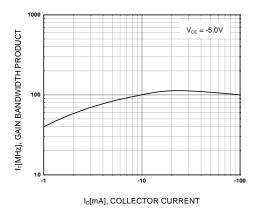
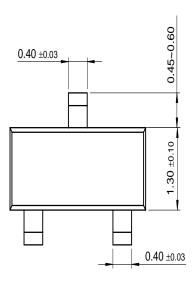
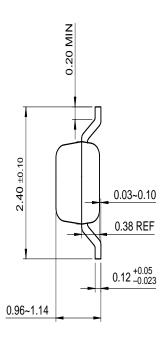


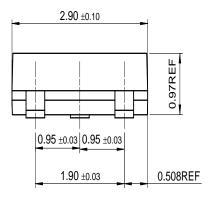
Figure 7. Current Gain Bandwidth Product

# **Package Dimensions**

## **SOT-23**







Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench <sup>®</sup>	SuperSOT™-6
$CROSSVOLT^{TM}$	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E <sup>2</sup> CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	$I^2C^{TM}$	$OCX^{TM}$	RapidConfigure™	UHC™
Across the board.	Around the world.™	OCXPro™	RapidConnect™	UltraFET <sup>®</sup>
The Power Franchise™		OPTOLOGIC <sup>®</sup>	SILENT SWITCHER®	VCX <sup>TM</sup>
Programmable Ad	ctive Droop™	OPTOPLANAR™	SMART START™	

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